



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,627	09/07/2005	John Harold Flexman	WRA-0006-US	5671
36183 7590 09/05/2007 PAUL, HASTINGS, JANOFSKY & WALKER LLP P.O. BOX 919092 SAN DIEGO, CA 92191-9092			EXAMINER VARGAS, DIXOMARA	
			ART UNIT 2859	PAPER NUMBER
			MAIL DATE 09/05/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/517,627

Applicant(s)

FLEXMAN ET AL.

Examiner

Dixomara Vargas

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-43, 53 and 54 is/are allowed.
- 6) ☒ Claim(s) 44-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 44-52 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claimed invention is directed to a judicial exception to 35 U.S.C. 101 (i.e., an abstract idea) and is not directed to a practical application of such judicial exception (e.g., because the claim does not require any physical transformation and the invention as claimed does not produce a useful, concrete, and tangible result). The language in the claim lacks a tangible result at the end of the procedure.

### ***Allowable Subject Matter***

3. Claims 44-52 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 101, set forth in this Office action.
4. The following is a statement of reasons for the indication of allowable subject matter:
  - a. With respect to claim 44, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a method for receiving a response signal via an antenna arrangement from a substance having a quadrupolar nuclei excited so as to produce nuclear quadrupole resonance in certain of

the quadrupolar nuclei, comprising the step of noise matching an amplifier to the antenna and lowering the Q factor of the antenna system during an entire duration of a receiving period in combination with the remaining limitations of the claim.

b. With respect to claims 45-52, the claims have been found allowable due to its dependency on claim 44 above.

5. Claims 1-43 and 53-54 are allowed.

6. The following is an examiner's statement of reasons for allowance:

c. With respect to claim 1, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a receiving system for connection to an antenna arrangement for detecting response signals from a substance having quadrupolar nuclei excited so as to produce nuclear quadrupole resonance therein, the system comprising a matching section to closely noise match the receiving system to the antenna for the entire duration of a receiving period; and has a low impedance to reduce the Q factor of the antenna in combination with the remaining limitations of the claim.

d. With respect to claim 53, the claim has been found allowable over the prior art of record because the prior art of record fails to teach or fairly suggest a system for connection to an antenna arrangement for receiving and detecting response signals from a substance having quadrupolar nuclei excited so as to produce nuclear quadrupole resonance therein, the system comprising means for noise matching the amplifier to the antenna during the entire duration of a receiving period and means for reducing the Q

Art Unit: 2859

factor of the antenna during the receiving period in combination with the remaining limitations of the claim.

e. With respect to claims 2-43 and 54, the claims have been allowed due to its dependency on claim 1 above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art of record cited in the PTO 892 discloses antenna and amplifier arrangements with matching systems after the receiving period wherein the Q factor is higher during the receiving period and lowered after the receiving period.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dixomara Vargas whose telephone number is (571) 272-2252. The examiner can normally be reached on Monday to Thursday from 8:00 am. to 4:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2859

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Dixomara Vargas  
Patent Examiner  
Art Unit 2859